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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,931	09/29/2000	Rainer Diez	69808	9393
22242	7590	04/14/2004	EXAMINER	
FITCH EVEN TABIN AND FLANNERY 120 SOUTH LA SALLE STREET SUITE 1600 CHICAGO, IL 60603-3406			TRAN, HIEN THI	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,931

Applicant(s)

DIEZ ET AL.

Examiner

Hien Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "15" has been used to designate both the intermediate pipe piece 15 (page 8, line 22) and protrusion 15 (page 8, line 1). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings to comply with CFR 1.84(p)(5), e.g. they should include the reference sign(s) mentioned in the specification and vice versa.

Specification

4. The disclosure is objected to because of the following informalities:

On page 5, line 14 --BRIEF DESCRIPTION OF THE DRAWINGS-- should be inserted.

- On page 8, line 22 "15" should be changed to --25-- for consistency and clarity (note line 12).

Appropriate correction is required.

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5. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

6. Claims 1, 11 are objected to because of the following informalities:

In claim 1, lines 3-4 "honeycomb-like" should be changed to --honeycomb--. See claim 11 likewise.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 2, 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2 and 10, it is unclear as to what structural limitation applicants are attempting to recite.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for

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patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-5, 7-11, 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Foster et al (6,162,403).

With respect to claims 1, 11, Foster et al disclose an exhaust gas purification system comprising:

at least one catalyst body which is arranged in a housing 20 and which has a honeycomb metal matrix 10 as a substrate for active catalyst material and a jacket 12 also made of metal, surrounding the matrix 10 and attached thereto via which the catalyst body is fixedly connected to the housing 20 at one point at its downstream end region; the jacket 12 protruding beyond the matrix 10.

With respect to claims 2-5, Foster et al discloses that the catalyst body is arranged inside an inner pipe 16 fixedly connected to the housing 20 and the catalyst body is in turn fixedly connected to the inner pipe 16, wherein the inner pipe 16 or the catalyst body is spaced from the housing 20 to form an insulation gap or space 52 and the catalyst body is spaced from the inner pipe 16 to form a space.

With respect to claims 7-8, Foster et al discloses that the inner pipe 16 is an extension of the inlet pipe piece or an outlet pipe piece and protrudes over the catalyst body (Figs. 1-3).

With respect to claims 9-10, 16, Foster et al discloses that the jacket 12 is connected to the housing 20 or the inner pipe 16 via an intermediate pipe piece 36, 40 (Figs. 1-3).

Instant claims 1-5, 7-11, 16 structurally read on the apparatus of Foster et al.

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Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. The art area applicable to the instant invention is that of catalytic converter.

One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone teach (*In re Bode*, 193 USPQ 12, (16) CCPA 1977); and who is motivated by economics to depart from the prior art to reduce costs consistent with the desired product characteristics. *In re Clinton* 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

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14. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foster et al (6,162,403) in view of Maus et al (5,190,732).

The apparatus of Foster et al is substantially the same as that of the instant claims, but is silent as to whether two catalyst bodies may be provided.

However, Maus et al shows the conventionality of providing an exhaust purification system with two catalyst bodies arranged behind one another in the direction of exhaust gas flow.

It would have been obvious to one having ordinary skill in the art to provide more than one catalyst bodies as taught by Maus et al in the apparatus of Foster et al so as to enhance the exhaust purification thereof.

15. Claims 1-5, 8, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Santiago et al (4,335,077) in view of Foster et al (6,162,403).

With respect to claims 1, 11, Santiago et al disclose an exhaust gas purification system comprising:

at least one catalyst body which is arranged in a housing 72 and which has a honeycomb matrix 65 as a substrate for active catalyst material and a jacket 66 surrounding the matrix 65 and attached thereto via which the catalyst body is fixedly connected to the housing 72 at one point at its downstream end region; the jacket 66 protruding beyond the matrix 65 (Fig. 10, col. 6, line 56 to col. 7, line 27).

The apparatus of Santiago et al is substantially the same as that of the instant claims, but fails to disclose whether the matrix and the jacket maybe made of metal.

However, Foster et al shows the conventionality of using metal in making the catalyst matrix and jacket.

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It would have been obvious to one having ordinary skill in the art to select metal as an alternate material for the matrix and the jacket as taught by Foster et al in the apparatus of Santiago et al since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

With respect to claims 2-5, Santiago et al discloses that the catalyst body is arranged inside an inner pipe 73 fixedly connected to the housing 72 and the catalyst body is in turn fixedly connected to the inner pipe 73, wherein the inner pipe 73 or the catalyst body is spaced from the housing 72 to form an insulation gap or space and the catalyst body is spaced from the inner pipe 73 to form a space (Fig. 10).

With respect to claim 8, Santiago et al discloses that the inner pipe 73 protrudes over the catalyst body (Fig. 10).

16. Claim 6 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Santiago et al (4,335,077) in view of Foster et al (6,162,403) as applied to claims 1-5, 8, 11 above and further in view of Usleman et al (5,293,743).

The modified apparatus of Santiago et al is substantially the same as that of the instant claim, but is silent as to whether the gas space may be closed at its downstream end.

Usleman et al discloses provision of the gas space being in communication with the exhaust gas at one end and being closed at another end.

It would have been obvious to one having ordinary skill in the art to provide a gas space being in communication with the exhaust gas at one end and being closed at another end as taught by Usleman et al in the modified apparatus of Santiago et al, on the basis of its suitability

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for the intended use as a matter of obvious design choice, absence showing any unexpected results thereof. Note that it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Furthermore, intended use is of no patentable moment in apparatus claims.

17. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Santiago et al (4,335,077) in view of Foster et al (6,162,403) as applied to claims 1-5, 8, 11 above and further in view of Maus et al (5,190,732).

The same comments with respect to Maus et al apply.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Usui et al is cited for showing state of the art.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hien Tran

HT
April 12, 2004

Hien Tran
Primary Examiner
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